

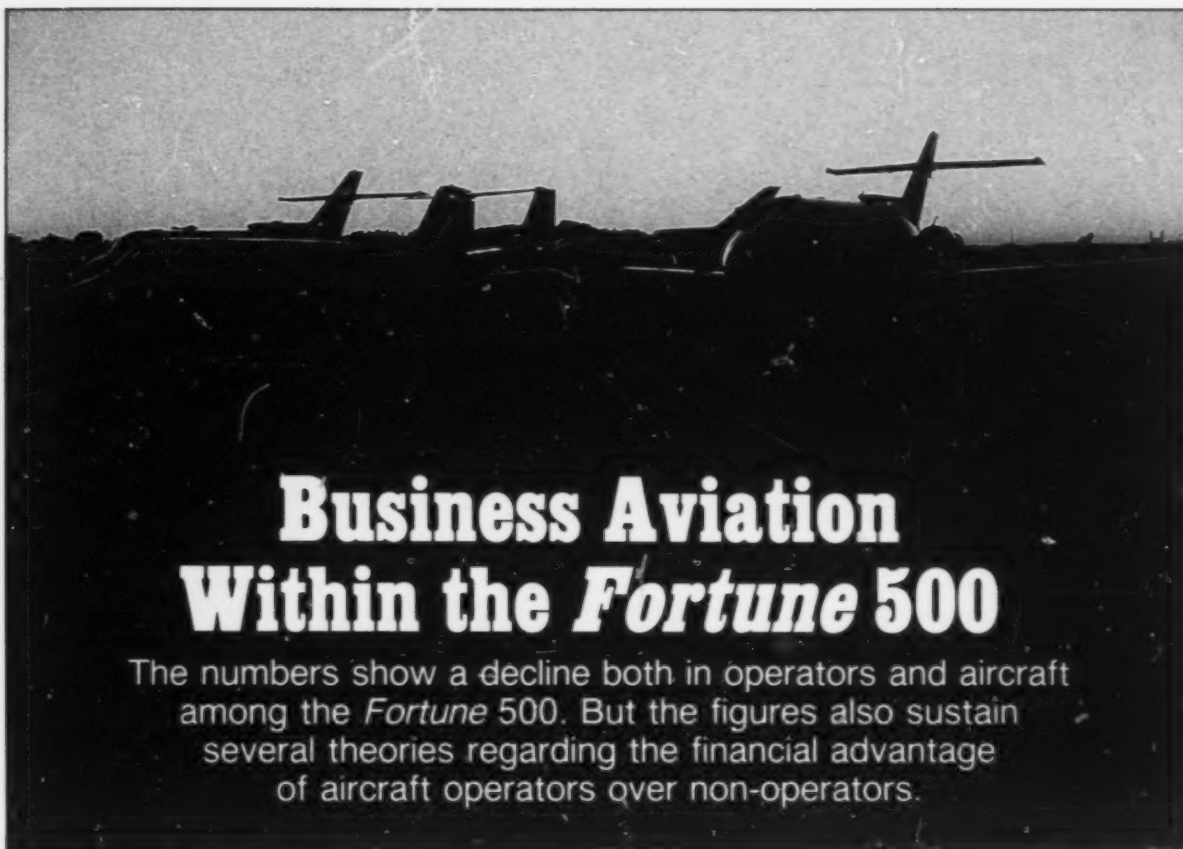
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Business **and commercial Aviation**

Business Aviation
and the
Fortune 500



David W. Almy

Business Aviation Within the *Fortune* 500

The numbers show a decline both in operators and aircraft among the *Fortune* 500. But the figures also sustain several theories regarding the financial advantage of aircraft operators over non-operators.

by David W. Almy

Fortune magazine's annual compendium of the 500 largest U.S. industrial corporations has been informing and surprising American business since 1955. Since 1972, Aviation Data Service of Wichita has been taking those numbers and reworking them, factoring in whether the companies operate business aircraft or not. B/CA has been analyzing both compilations for as long as the two have been available, the results of which appear here for the 12th time.

A quick look at those numbers reveals a not unexpected pattern. Companies that operate business aircraft continued to match or outperform their non-operating counterparts during 1983. No one has yet to crystalize a cause-and-effect relationship between aircraft ownership and improved financial performance. If sound management is accepted as a prerequisite for strong financial performance, however, and the use of business aircraft represents sound management, then it follows that those companies operating aircraft should perform better financially than those that do not operate aircraft. That, indeed, is the case.

The economic upswing of 1983 sustained an hypothesis reported in last year's analysis: In good economic times,

the disparity in financial performance between aircraft operators and non-operators closes, with a majority of the industrials sharing the benefits of economic resurgences, regardless of their business aviation activity. It is during hard times, however, that the management philosophy personified by aircraft operation reveals those companies that are more likely to prosper.

Sixty of the *Fortune* 500 lost money in 1983, and among those 60, the split between operators and non-operators was nearly identical to the general percentages at large. Although companies with aircraft have in the past emerged faster and surer from economic downturns than their non-operating competition, having an aircraft does not make a company immune to economic hardship.

But it doesn't hurt either. *Fortune* magazine compiled a list of all-time "superperformers"—companies that had averaged at least a 20-percent return on year-end shareholders' equity over the past decade and had been so consistent that their return never dipped below 15 percent. Only 13 companies achieved such success: American Home Products (29.5 percent), Dow Jones (26.3 percent), Mitchell Energy (26.0 percent), Smith-

Kline Beckman (25.4 percent), Kellogg (24.8 percent), Deluxe Check Printers (24.1 percent), Worthington Industries (23.9 percent), Maytag (23.1 percent), Merck (21.9 percent), Nalco Chemical (21.5 percent), IBM (20.5 percent), Dover (20.3 percent) and Coca-Cola (20.3 percent). Twelve of these 13 "superperformers" operate business aircraft.

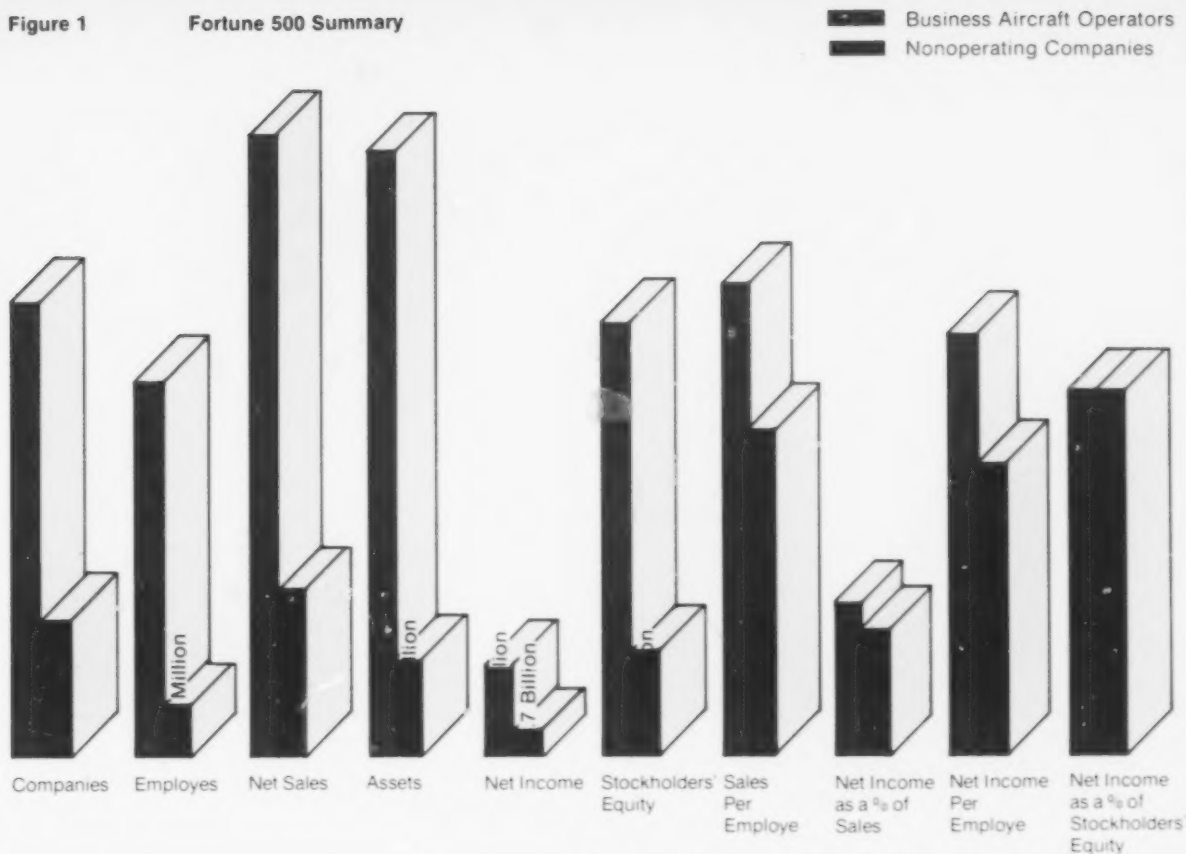
Overall, however, just under three fourths of the *Fortune* 500 operate their own aircraft. At the close of 1983, 363 corporations (72.6 percent) were involved with business aviation in one way or another, while 137 (27.4 percent) were not. These numbers reveal a drop of 10 in the number of operating companies—one of the most significant trends in several years and one possibly due in part to the "uneven" recovery.

Among the top 100 companies, only four were without company-owned business aircraft. Heading the non-operating list was American Home Products, which checked in at No. 73, American Brands at No. 79, CPC International at No. 90 and Agway at No. 98.

Those companies operating aircraft in 1983 continued to match or outperform the non-operators. In 1983, the 363 operating companies generated 91 percent of

Figure 1

Fortune 500 Summary



Business aircraft operators matched or outperformed non-operators across the board in 1983. Consistent with past analyses, these columns graphically illustrate the size and efficiency advantages of the aircraft operators over the non-operators.

total net sales, employed 88 percent of the 14.1 million working for the *Fortune* 500 corporations, held 92 percent of the \$1.35 trillion in assets, garnered 92 percent of the \$68.8 billion in net income and held 92 percent of the \$632 billion in stockholders' equity.

Similarly, the ranking of the operators by "per employee" comparisons reveals that aircraft operators hold similar advantages over non-operators. For example, sales per employee were 33 percent higher for aircraft operators, with net income (the true "bottom line") ahead by 45 percent for those operating aircraft.

Fleet Make-up

The average number of aircraft in a *Fortune* 500 corporation's fleet was just

Until fiscal 1982, *Fortune* tracked the financial performance of the top 1,000 industrial corporations. For 1982, however, *Fortune* dropped the *Fortune* 1,000 and replaced it with the *Fortune* 500 (composed of manufacturing industrials) and the Service 500—a listing of corporations that provide services instead of manufacturing products. Although the *Fortune* 1,000/500 charts can be used to observe trends, they are not comparable except within similar statistical bases.

Figure 2

Sales Per Employee

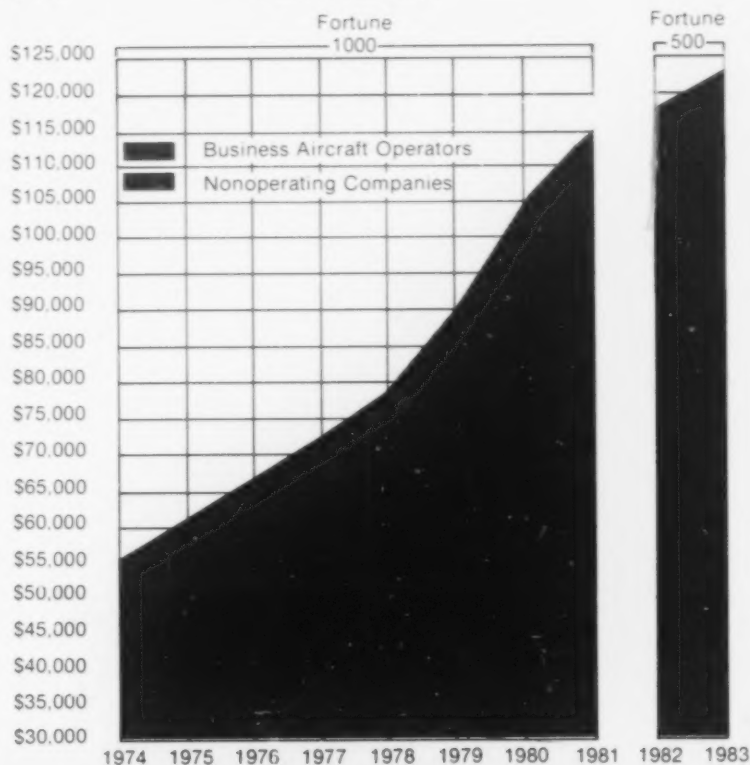
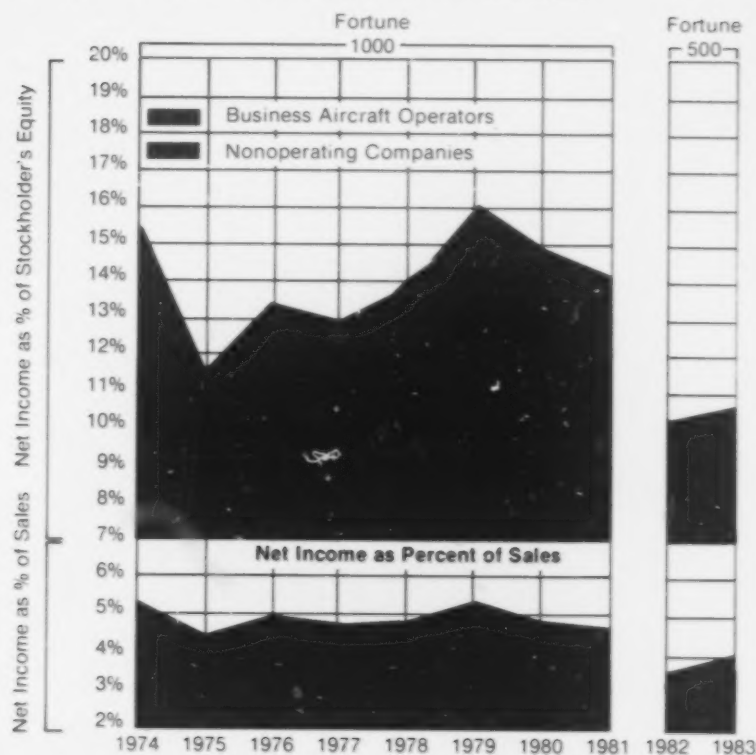


Figure 3 Net Income as Percent of Stockholders' Equity



under five in 1983—a slight decline. Nearly one quarter (85) of the operators fly only one aircraft. An even dozen operate 22 or more, with two corporations operating sizable fleets of 47 aircraft—more air capacity than that of many regional airlines.

The average fleet size of the five largest operators was 37.6 in 1983—down from 39.8 in 1982, but up from 34 in 1980.

The five largest operators and their 1982/1983 fleet sizes were: Standard Oil of California, 46/47; Rockwell International, 45/47; Tenneco 37/34; United Technologies, 40/32. Mobil, 32/28, and Atlantic Richfield, 26/28, tied for fifth place in 1983.

Forty-eight airframe manufacturers are represented within the 1,798 aircraft in the 1983 *Fortune* fleet.

More companies operated Beechcraft equipment than any other manufacturer's, although more Cessnas were operated by the *Fortune* 500 than any other aircraft. In terms of the top eight manufacturers, the *Fortune* 500 operated 263 Cessnas, 250 Beechcrafts, 228 Gulfstreams, 166 Dassault Falcons, 133 Gates Learjets, 117 Bells, 110 Rockwell Sabreliners and 45 Sikorskys.

The *Fortune* 500 corporations are traditionally broken down into 26 categories that cover all areas of industrial production. The highest concentration of aircraft

Figure 4

Comparative Fleet Size	
Number of Aircraft	Number of Companies
1	85
2	70
3	55
4	33
5	17
6	23
7	17
8	6
9	7
10	15
11	3
12	4
13	3
14	5
15	3
16	3
17	2
22	3
23	1
24	1
27	1
28	2
32	1
34	1
47	2
1,798	363

Figure 5

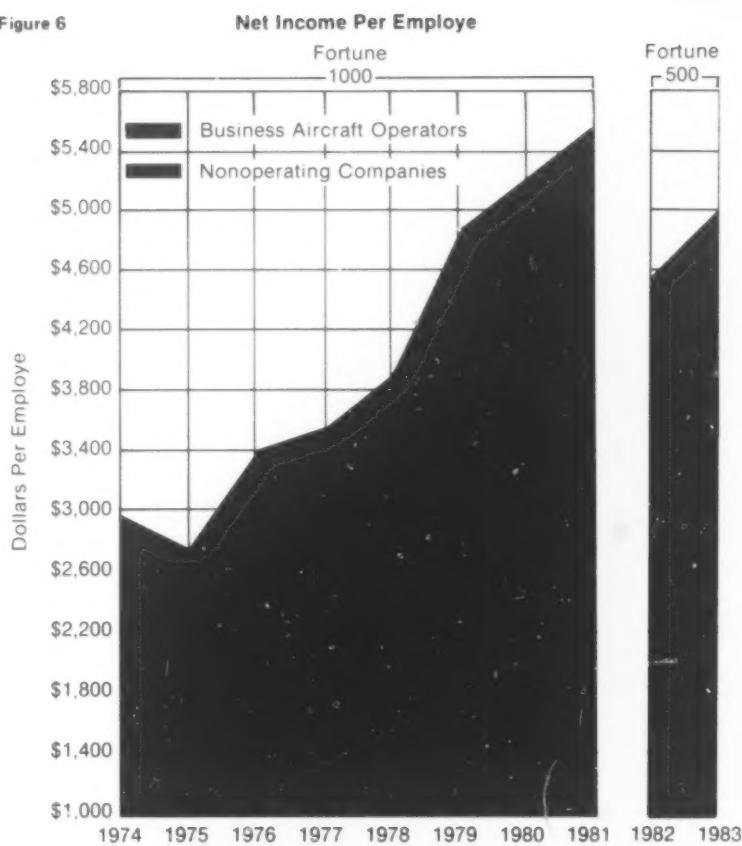
Groups	Companies		Aircraft Operated
	Non-operators	Operators	
Mining, Crude Oil Production	0	10	49
Food	20	36	111
Tobacco	1	2	17
Textiles, Vinyl Flooring	3	7	14
Apparel	2	10	37
Furniture	1	0	0
Paper, Fiber & Wood Products	5	24	107
Publishing, Printing	7	12	43
Chemicals	17	26	122
Petroleum Refining	6	30	325
Rubber, Plastic Products	3	8	30
Leather	1	0	0
Glass, Concrete, Abrasives, Gypsum	2	14	43
Metal Manufacturing	7	19	62
Metal Products	6	15	40
Electronic Appliances	15	32	173
Shipbldg., RR & Transport Equip.	3	6	35
Measuring, Scientific, Photo Equip.	7	9	32
Motor Vehicles	3	12	52
Aerospace	2	15	206
Pharmaceuticals	5	15	44
Soaps, Cosmetics	3	6	19
Office Equipment (Computers)	9	9	47
Industrial & Farm Equipment	3	35	150
Musical Instr., Toys, Sport Goods	2	3	8
Beverages	4	8	32
Average or Total	137	363	1,798

operators within these categories is in the "Mining, Crude-Oil Production," where 100 percent of those companies in that industrial category fly their own aircraft. "Industrial & Farm Equipment" was second, with 92 percent of the firms in that category operating aircraft. "Aerospace" and "Metal Manufacturing" were tied for third, with 88 percent of each category's operators plying the skies.

Petroleum refiners operate 18 percent of the aircraft flown by the *Fortune* 500, while aerospace companies fly 11 percent. Electronic appliance manufacturers fly 10 percent of the business aircraft flown by the *Fortune* 500, and industrial & farm equipment manufacturers fly eight percent.

Consistent and overwhelming evidence continues to mount that the financial performance of the top U.S. industrial corporations is heavily biased *against* those companies that do not operate aircraft. While the explanation for this disparity is not entirely clear, the majority of corporations that are considered "best managed" and which turn in the best financial performance year after year are characteristically those that operate business aircraft. It would follow that these successful corporations will continue to be the most profitable during the remainder of the decade and that they will further their leadership into the 1990s. □

Figure 6



Sales Per Employee		Net Income as a Percent of Sales		Net Income Per Employee		Net Income as a Percent of Stockholders' Equity	
Non-operators	Operators	Non-operators	Operators	Non-operators	Operators	Non-operators	Operators
0	315,394	0	2.2	0	6,937	0	6.1
134,595	105,270	2.0	3.2	2,710	3,331	9.7	13.1
59,952	130,444	8.8	8.3	5,274	10,866	18.7	19.3
54,086	57,696	1.9	3.1	1,001	1,775	5.6	8.3
61,274	51,336	6.4	1.3	3,909	671	17.6	3.9
54,794	0	2.0	0	1,115	0	6.4	0
96,642	116,380	4.3	3.5	4,169	4,061	10.5	7.2
80,093	96,280	8.1	7.5	6,525	7,329	17.7	17.6
149,236	139,382	3.9	3.3	5,862	4,569	11.4	7.6
278,659	415,638	0.6	4.2	1,722	17,614	4.3	11.2
100,917	78,310	3.1	2.8	3,139	2,196	10.2	8.4
48,467	0	-0.3	0	-149	0	-2.2	0
79,508	88,287	1.6	3.8	1,287	3,374	3.2	8.6
103,491	114,156	-0.3	-4.4	-337	-5,069	-0.4	-12.4
70,255	99,837	4.9	3.8	3,448	3,837	11.1	11.2
56,910	66,505	3.4	4.1	1,936	2,827	8.6	10.5
81,312	79,138	2.8	1.9	2,259	1,529	9.5	6.6
89,822	76,121	3.3	6.2	2,283	4,747	7.4	10.9
104,623	109,177	-1.9	4.2	-1,993	4,634	-14.8	18.8
101,677	89,347	6.8	3.5	6,867	3,083	22.6	13.0
86,032	86,286	10.3	10.9	8,821	9,391	20.8	19.0
174,601	125,499	2.5	6.1	4,358	7,605	9.0	17.0
79,553	83,814	5.1	10.1	3,978	8,448	11.3	17.8
70,037	74,962	3.8	0.4	2,676	297	10.5	0.8
99,406	66,264	1.8	-2.4	1,793	-1,591	9.6	-7.0
114,190	96,811	9.4	6.0	10,683	5,774	24.1	14.8
93,119	123,563	3.8	4.1	3,507	5,076	10.9	10.9

Supercorporation Aircraft Fleet Census

Company	Fortune Rank	Aircraft Number	NCA Code	Company	Fortune Rank	Aircraft Number	NCA Code	Company	Fortune Rank	Aircraft Number	NCA Code
A E Staley Manufacturing	207	1 3	LTP MJ	Anchor Hocking	349	1 1 1	LTP* MJ MJ*	Beatrice Foods	36	1 2 1 1	HJ LTP LTP* PPT
Abbott Laboratories	137	1 1	LTP* MJ	Anheuser-Busch	55	2 1 2 1	HJ HJ* MJ MJ*	Becton Dickinson	273	1 1 1	HJ LTP MJ
Adolph Coors	278	2	MJ	Archer-Daniels-Midland	83	1 1 2	HJ LTP MJ	Bemis	373	1	MJ
Air Products & Chemicals	212	1 1	LJ MJ	Armco	87	2 3	HJ MJ	Bethlehem Steel	69	1 2 1	HJ HTP MJ
Allegheny International	160	3 1 3 1	HJ LTP* MJ PPT*	Armstrong World Industries	240	2 2	HTP MJ	Big Three Industries	385	1 1 1	HJ LTP* MJ
Allied	29	2 1 2 4 1 4 5 2 1 1 1	HJ* HTP* LJ* LPT* LTP LTP* MJ MJ* SE* TH* TTH*	Arvin Industries	408	3 1 1	HPT* LPT* MJ*	Black & Decker Manufacturing	265	2	MJ
Allis-Chalmers	253	2	MJ	Asarco	229	1	HJ	Blue Bell	258	3 1	HTP LTP
Alumax	230	1 1	LJ* LTP*	Ashland Oil	45	3 4 1 1	LTP MJ SE TH	BOC	282	1 1	LJ* MJ
Aluminum Co. of America	65	1 1 1 3 1	HJ HTP LTP MJ MJ*	AT&T Technologies	26	2 1	HJ SE*	Boeing	27	2 3 2 3	HJ LJ SE TTH
AMAX	164	2 1 1 1	HJ LTP* MJ TTH	Atlantic Richfield	12	4 1 1 2 1 9 1 7 2	HJ HPT LJ* LPT LTP MJ PPT* SE* TTH	Boise Cascade	113	1 1 1 1	HJ LTP MJ TH*
Amdahl	350	1	MJ	AVCO	179	2 1 2 1	HJ HPT LPT MJ PPT	Borden	85	1 1 1 1	HJ LTP LTP* SE*
Amerada Hess	39	2 1	HJ MJ	Avon Products	131	1 1	MJ MJ*	Borg-Warner	106	1 3 1 1 2	LPT LTP* MJ PPT
American Bakeries	460	1	LTP	B F Goodrich	125	1 1 1	HJ LTP MJ	Briggs & Stratton	403	1 1	LTP MJ
American Can	117	2 1	HJ MJ	Baker International	192	1 3	LPT SE*	Bristol-Myers	93	5 1	HJ MJ
American Cyanamid	107	1 1	HJ MJ	Ball	315	2 1 1	LTP MJ PPT	Brockway	336	2 1 1 1 1	HTP LTP LTP* MJ MJ*
American Petrofina	176	1 1	LJ* MJ*	Bangor Punta	438	9 2 3 1 2	LPT* LTP LTP* PPT* SE*	Brunswick	260	1 2	LTP MJ
American Standard	170	1 2 1	HJ MJ TH	Bausch & Lomb	424	1	LTP	Bucyrus-Erie	434	2	MJ
AMF	303	1	MJ	Baxter Travenol Laboratories	191	1 1	MJ	Burlington Industries	133	1 1 2	HJ LJ MJ
AMP	228	1 6 2	LTP LTP MJ					Burroughs	82	1 2	HJ MJ
								Cabot	224	1	MJ

Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code
Cameron Iron Works	307	1	HJ	Continental Group	68	1	MJ			1	SE
		1	HTP			4	MJ			1	TH*
		1	LTP			2	MJ*			1	TH
		1	MJ	Cooper Industries	190	1	LTP	Eagle-Picher Industries	443	1	TTH*
Campbell Soup	119	1	MJ			3	MJ			1	LTP
Caterpillar Tractor	64	3	MJ	Cooper Labs	476	1	MJ*	Easco	457	1	MJ
CBI Industries	337	1	MJ	Cooper Tire & Rubber	472	1	MJ	Eastman Kodak	30	1	MJ
CECO	469	1	MJ*			1	LTP			1	HJ
Celanese	122	1	MJ*	Corning Glass Works	217	1	MJ			2	HTP*
		1	LPT*			1		Eaton	138	7	MJ
		1	LTP*			2	HTP	Echlin	428	1	LTP
		1	MJ	Crane	294	1	LTP	EG&G	318	3	HJ
Central Soya	200	1	LTP			1	HJ			2	LPT
		1	MJ	Crown Central Petroleum	208	1	MJ*	E-Systems	338	1	LPT*
Certaiteed	288	1	MJ	Crown Cork & Seal	254	1	PPT			1	MJ*
Cessna Aircraft	445	2	LPT			1	MJ	Eli Lilly	130	3	HJ
		1	LTP	Crown Cork & Seal	254	1	HJ			1	HTP
		1	MJ			1	MJ			2	LPT*
		3	PPT	Crown Zeilerbach	144	2	LPT	Emerson Electric	111	2	HJ
		3	SE	Cummins Engine	216	1	HTP			1	LTP*
		2	SE*			2	MJ			1	LTP*
CF Industries	328	2	MJ	Cyclops	290	1	HTP			3	MJ*
Champion International	86	2	HJ			2	MJ			1	MJ*
		1	MJ	Dana	139	1	MJ			1	TH*
Champion Spark Plug	354	1	HJ			1	MJ	Emhart	205	1	TTH
		2	HTP			1	HJ			1	LTP*
		2	MJ			5	LTP	Esmark	88	3	HJ
Charier	61	2	HJ			1	MJ			3	MJ
		2	MJ	Dart & Kraft	33	6	SE	Ethyl	197	1	HJ
Chesebrough-Ponds	206	1	MJ	Dayco	371	1	MJ*			1	MJ
Chromalloy American	297	1	HJ	Deere	92	1	LTP	Ex-Cell-O	308	1	MJ*
		1	HJ*			2	HJ	Exxon	1	1	LTP
		1	MJ*			3	MJ			7	HJ
		1	PPT	Deluxe Check Printers	400	1	MJ			1	LJ*
Chrysler	21	1	HJ	Diamond Shamrock	89	2	MJ			1	MJ
Clark Equipment	327	2	MJ			5	MJ*			1	MJ*
Clorox	314	2	HJ	Digital Equipment	84	1	TH*			1	TH
		1	LTP*			1	LTP	Fairchild Industries	321	1	TTH*
Cluett Peabody	325	1	MJ			4	LTP			3	LPT*
Coachman Industries	463	1	MJ			1	LTP			6	LTP*
		1	LJ	Dover	292	1	TH			1	SE*
Coastal	58	2	LTP	Dow Chemical	28	1	LTP*	Federal Co.	275	5	LTP*
		1	HJ			1	HJ			1	MJ
		2	LPT			1	HTP*	Federal Paper Board	423	1	MJ
		2	LTP			4	LTP	Federal-Mogul	363	1	LTP
		5	MJ			3	LTP*			1	MJ
		2	MJ*			3	MJ	Fieldcrest Mills	435	1	MJ
		1	SE*	Dow Corning	355	2	SE*			1	MJ
Coca-Cola	48	3	HJ			1	LTP	Figgie International Holdings	386	1	HJ
		1	MJ			2	MJ			1	LJ
Colgate-Palmolive	72	1	HJ	Dow Jones	326	2	HJ			1	LPT*
		1	TTH			1	LJ*			1	MJ
Collins & Aikman	378	1	LTP			2	MJ*	Firestone Tire & Rubber	95	2	MJ
Combustion Engineering	129	4	HJ	Dresser Industries	112	3	TH			1	LTP
		1	SE			1	HJ	Flowers Industries	446	1	LTP
Conagra	162	1	HJ	E I Du Pont De Nemours	7	5	MJ			3	LTP
		1	MJ			1	HJ*	FMC	110	1	HJ
		1	SE			3	HTP			2	MJ
Consolidated Foods	49	1	LPT*			4	LTP	Ford Motor	4	2	HJ
		1	LTP*			7	LTP*			2	HJ
		1	LTP*			3	MJ				

Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code
		4	HTP	Gould	198			Inland Steel	127	1	TH*
Fort Howard Paper	347	2	MJ	Great Northern Nekoosa	222	2	MJ			1	LJ
Freeport-McMoran	346	1	MJ			1	LPT*	Inspiration Resources	357	1	LTP
		1	HJ	Grumman	167	3	LPT*			1	MJ
Fuqua Industries	367	1	HPT			1	HJ	Interco	150	1	
		1	LTP*			2	HTP			1	LJ*
		1	MJ			1	LPT			1	MJ*
G D Searle	296	1	MJ*			1	LTP	Interlake	332	2	PPT*
		1		Guardian Industries	468	1	TTH			1	MJ
G Heileman Brewing	268	1	LTP			2		International Business Machines	5		
		2	LPT	Gulf & Western Industries	67	1	MJ			2	HJ
Gannett	203	2	MJ			1	TH			1	HJ*
		1	HJ			1	LPT			4	MJ
		1	LTP*			1	LPT*			2	MJ*
		2	MJ			1	LPT*			1	TTH
		1	MJ*			2	MJ	International Harvester	104		
General Dynamics	46	1	TH*			3	MJ*			1	MJ
		2	HJ			1	PH	International Minerals & Chemicals	237		
		1	LTP*			1	SE			1	LPT
		2	MJ			1	TH*			1	LTP
		1	MJ*	Gulf Oil	11	1	TTH*			1	MJ
General Electric	10	5	HJ			3	HJ			1	SE
		2	HTP			1	LPT			1	TH*
		1	LPT*			1	LTP	International Multifoods	274		
		3	MJ			1	LTP*			2	MJ
		1	MJ*	H J Heinz	100	1	MJ	International Paper	80		
		1	TH*			2	HJ			1	HJ
		2	TTH			1	LPT*			2	LJ
General Foods	41	1	HJ	Hammermill Paper	214	1	MJ			3	MJ
		3	MJ							2	PH*
		1	MJ*	Harris	201	1	LTP*			1	SE
General Mills	62	1	HJ			2	MJ	ITT	20	3	TH
		1	LJ*	Harsco	331	2	MJ			4	HJ
		1	LPT*			2				1	HJ*
		1	MJ	Harte-Hanks Communications	485	1	LTP			4	HTP
		3	MJ*			1	LTP*			1	LPT*
General Motors	2	2	HJ	Hartmarx	304	2	LTP*			1	LTP
		3	HTP	Harvey Hubbell	490	1	LTP	J P Stevens	186	1	MJ
		4	LTP	Hercules	148	1	HJ	James River Corp. of Virginia	209	1	MJ
		3	MJ			1	MJ			1	MJ
General Signal	220	1	MJ	Hershey Foods	202	1	HJ	Jim Walter	181	1	HJ
General Tire & Rubber	168	1	HTP			1	LTP			1	MJ
		1	LTP	Hewlett-Packard	75	1	HJ	Johnson & Johnson	57		
		2	MJ			2	LTP			1	HJ
		2	MJ*			3	MJ			3	MJ
Geo A Hormel	241	1	MJ	Hillenbrand Industries	488	2	HTP	Johnson Controls	251	2	TTH
Georgia Kraft	449	1	LTP			2	MJ			1	LTP
Georgian-Pacific	51	1	HJ	Holly	484	1	SE			1	MJ
		3	LJ	Honeywell	60	4	HJ	Joseph E Seagram & Sons	233		
		1	LPT	Hoover	387	1	MJ			3	HJ
		1	LTP	Hoover Universal	351	1	MJ			1	LTP
		2	MJ	Hughes Tool	267	1	HJ			1	MJ
		1	HJ*			1	HTP	Joy Manufacturing	390	2	MJ
		1	LTP*			1	LTP			1	TTH
		3	MJ*			1	MJ	Kaiser Aluminum & Chemical	140	1	MJ
Gillette	169	1	HJ			1	PH	Kaiser Steel	396	1	MJ
Gold Kist	238	1	LTP			1	PPT*	Kane-Miller	353	1	LPT*
						3	SE	Kellogg	158	1	HJ
Goodyear Tire & Rubber	32	1	HJ	Hyster	497	1	LTP			1	MJ
		1	LPT	IC Industries	96	1	LTP*	Kellwood	421	1	LTP
		2	LTP*			5	MJ*			1	MJ
		4	MJ	Ingersoll-Rand	165	1	HJ			1	LTP
		1	MJ*			1	LTP*				
		4	SE								

Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code	Company	Fortune Rank	Aircraft Number	BCA Code
Kerr-McGee	108					1	LTP	National Gypsum	270		
Kidde	161	3	MJ			1	MJ			1	HJ
Kimberly-Clark	120		HJ*	McDonnell Douglas	42		PPT*	National Intergroup	132		LPT*
		1	HJ			2	LTP			2	HJ
		1	HTP	McGraw-Edison	175		MJ			1	MJ
		1	LPT			1	HJ			1	TH*
		1	LTP*			1	HJ*	NCR	101		TTH*
		5	MJ			1	MJ			3	MJ
		1	SE	McGraw-Hill	255		TH*	New York Times	281		MJ
Knight-Ridder Newspapers	234			Mead	149					1	HJ
		1	HJ	Media General	453		MJ	NL Industries	239		MJ
Koppers	221		LTP			1	LPT			1	HJ
Land O'Lakes	121		HJ			1	LTP			1	HTP*
		1	LPT	Merck	124		LTP*			3	LTP
		1	LTP	Meredith	479					3	SE
Lear Siegler	236					1	LTP*			2	SE*
		1	HJ			1	LTP*	Northrop	123		HJ
		1	HTP			2	MJ			2	LPT
Libbey-Owens-Ford	266			Midland-Ross	360		LPT			2	LTP*
		1	LJ*			1	LTP			1	LTP*
		1	LTP*			1	LTP			1	MJ
		1	MJ*			2	MJ			1	SE*
Litton Industries	74			Miles Laboratories	277					1	TH*
		1	HJ*			2	LTP	Northwest Industries	183		
		2	HPY*			1	MJ			1	MJ
		1	LJ*	Minnesota Mining & Manufacturing	47					4	MJ*
		7	LPT*			5	HJ	NVF	295		SE*
		2	LTP			2	HTP			1	HJ*
		1	MJ	Mitchell Energy & Development	305			Occidental Petroleum	14		
		1	MJ*			1	LPT			3	HJ
		1	SE*			1	LTP			1	HJ*
Lockheed	50					1	LTP*			1	HTP*
		2	HJ	Mobil	3					1	LPT*
		2	LPT			3	HJ			5	LTP*
		1	LPT*			1	HJ*			1	MJ
		1	LTP			2	LJ			7	MJ*
		2	MJ*			1	LJ*			3	TH*
Lone Star Industries	313					1	LTP	Ogden	187		HJ
		1	HJ			3	MJ*			1	
Louisiana Land & Exploration	257					1	MJ*	Olin	185		
		1	HJ			1	SE*			1	HJ
		1	MJ			4	SE*			1	MJ
Louisiana-Pacific	279					9	TH	Outboard Marine	344		
		1	HJ			1	TH*			1	HTP
		3	LJ			1	TTH			1	LTP
		1	LPT					Owens-Corning Fiberglass	142		
		5	MJ	Monfort of Colorado	250		LPT			1	HJ
		4	TH			1	LTP			1	HTP
LTV	78			Monsanto	52					1	MJ
		1	HTP*			1	HJ	Owens-Illinois	115		
		1	LTP*			1	MJ			2	HJ
		1	MJ*	McCormack Resources	496					2	HTP
		1	TH*			1	LTP*	Oxford Industries	450		
MIA-Com	395					1	MJ			1	LPT
Mack Trucks	259					1	MJ*	Pabst Brewing	376		
		1	TTH			1	MJ*			1	LJ
Magic Chef	361			Morton Thiokol	231			Paccar	242		
		1	LTP*			1	HJ			2	MJ
		1	MJ			1	LTP	Palm Beach	467		
Manville	199					2	MJ*			1	MJ
		1	HJ			1	PPT*	Peabody International	481		
		2	MJ	Motorola	81					1	LPT*
		1	MJ*			1	HJ			1	SE*
		1	TH			2	MJ	Penn Central	151		
MAPCO	177			Murphy Oil	157					5	LTP*
		2	LTP			1	LJ			2	MJ*
		1	MJ			2	MJ	Pennwalt	301		
Marmon Group	235			Nabisco Brands	56					1	LTP
		1	LPT*			2	HJ*	Pennzill	163		
		1	LTP*			2	MJ*			1	MJ
Martin Marietta	94			Nalco Chemical	389					4	HJ
		3	HJ			1	MJ			1	HTP
		1	LJ			2	SE			1	SE
		1	HJ			1	SE*	Pepsico	44		
Masco	286			National Car	210					3	HJ
		1	HJ			1	MJ			1	LTP*
		2	LPT*	National Distillers & Chemical	166					1	MJ*
		3	LTP			2	HJ	Pfizer	99		
		2	LTP*			1	TH*			5	MJ
		2	MJ							1	TH
Maytag	409										
McCormick	365										

Company	Portons Rank	Aircraft Number	BGA Code	Company	Portons Rank	Aircraft Number	BGA Code	Company	Portons Rank	Aircraft Number	BGA Code
Philip Morris	35	3 4 3	HJ HTP MJ	Savannah Foods & Industries	461	1 1 1	LTP MJ	Standard Oil of California	9	1 1 1	MJ* SE* TH*
Phillips Petroleum	16	1 1 5 4	HJ LPT MJ SE	Schering-Plough	194	1 2	LTP* MJ			2 1 1	HJ HTP* LTP
Pillsbury	102	1	MJ	SCM	193	1 1	LJ PPT			2 2 1	LTP* MJ PH*
Pittway	491	1	MJ	Scott & Fetzer	397	1 1	LTP MJ			2 2 5	SE SE* TH
Potlatch	317	1 1 1	LPT LTP MJ	Scott Paper	156	2	HJ	Stanley Works	296	1	LTP
PPG Industries	103	1 1	HJ HTP	Scovill	366	1	MJ	Stauffer Chemical	249	1 1 1	HJ LJ MJ
Procter & Gamble	22	4 1 3 2	HJ LJ* MJ SE*	Sealed Air	494	1	LTP	Stokely-Van Camp	444	1	LTP
Quaker State Oil Refining	319	1	LTP	Shell Oil	13	2 2 5 1	HJ LTP LTP TH*	Stone Container	391	1	LTP
R J Reynolds Industries	23	1 2 4	HJ MJ MJ*	Sheller-Globe	405	1 1	LTP MJ	Storage Technology	322	1	MJ
R R Donnelley & Sons	226	1	MJ	Sherwin-Williams	184	1	MJ	Sun	17	2 1 1	HJ LTP LTP*
Ralston Purina	71	1 2 4 2	HTP MJ PH TH	Signal Companies	54	1 3 1 4 1 8 1 2	HJ HJ* LPT* LTP* MJ MJ* PH* TTH TTH*	Sundstrand	315	1 2 2 3	HTP* LJ LPT* LTP*
Raytheon	59	1 2 1 2 1 2 1 2	LPT LPT* LTP LTP* MJ MJ* SE SE*	Singer	155	1 1 1 1 1	HJ HPT LTP LTP* MJ MJ*	Sun-Diamond Growers of California	447	1	LPT
Republic Steel	145	1 2 1 6	HJ MJ PPT* SE*	Smith International	375	1 1 4	HJ LTP SE*	Superior Oil	196	2 1 1 1	HJ LTP LTP* MJ
Revlon	159	1	HJ	SmithKline Beckman	126	1	HJ	Tecumseh Products	334	3	LTP
Rexnord	342	1	LTP*	Sonoco Products	383	1	LJ	Tektronix	263	1	PPT*
Reynolds Metals	118	1 2 2	MJ MJ MJ	Southwest Forest Industries	380	2 1	LTP MJ	Teladyne	135	1 1 3 3 1 4 3 5	LJ LPT LTP LTP* MJ* PPT* PPT* SE SE*
Rockwell International	43	1 3 2 3 5 3 10 2 1 4 6 4 3	HJ HTP HTP* LPT* LTP LTP* MJ MJ* PH SE SE* TH* TTH	Sperry	66	1 1 1 2	HJ LTP* MJ TTH	Tenneco	19	7 1 2 4 4 1	HJ HJ* HTP HJ HJ HPT LTP*
Roper	462	1 1 1 1	LPT LTP MJ PPT	Springs Industries	320	1	TH	Texas Instruments	77	2 1 4	HPT HTP MJ
Rorer Group	466	1	TH	Square D	269	1 1	HJ LTP	Textron	134	1 1 1 1	LJ* LTP LTP* MJ
Royal Crown Companies	459	1	MJ	St Regis	141	1 1 1	HJ MJ SE			1 1 1 1	LJ* LTP LTP* MJ
Rubbermaid	487	1	MJ	Standard Oil (Indiana)	8	4 2 1 2 1 5	HJ HPT* LJ* LTP* MJ SE*			1 1 1 1	LJ* LTP LTP* MJ

Company	Portase No.	Aircraft Number	SEA Code	Company	Portase No.	Aircraft Number	SEA Code	Company	Portase No.	Aircraft Number	SEA Code		
Time Inc.	91	1	TH	Union Pacific	40	1	HJ	Waller-Lambert	128	1	MJ SE*		
		3	TH*			3	MJ			1	MJ		
		1	TTH			3	MJ*			2	TTH		
		3	TTH*	United Brands	108	1	HJ	West Point- Pepperell	252	1	LTP		
		1	HJ*			1	LPT*			1	MJ		
		1	HTP			United Technologies	16			1	HJ	Westinghouse Electric	34
		1	LJ*	1	HJ*			5	MJ				
		2	LPT*	1	LPT*			1	TH*				
		1	LTP*	1	LTP			Westmoreland Coal	437	1	MJ		
		3	MJ	1	PH					1	LJ		
3	MJ*	13	TTH	1	MJ								
1	TH*	Unocal	31	3	HJ			Weyerhaeuser	70	1	HJ		
2	TTH			1	HTP					2	LTP		
3	MJ			1	MJ					2	MJ		
Timber	310	1	MJ	Luzern	102	1	HTP	Whitpool	147	1	HJ		
Tisco	153	1	MJ SE*			1	MJ			2	HTP		
Tane	204	1	HTP	U S Gypsum	215	1	HJ			Williams Companies	172	1	LJ*
Tribune	218	1	MJ			1	MJ	4	MJ SE*				
		1	MJ*			VF	280	1	LJ*			Wm. Wright Jr.	414
		3	LTP	1	LPT*			Worthington Industries	475	2	MJ		
Trinity Industries	405	1	LJ	1	LTP					Xerox	38		
		1	MJ	1	LTP*	1	HTP						
		1	MJ*	2	MJ*	3	MJ						
TRW	63	3	LTP	Vulcan Materials	339	2	MJ	-					
Tyson Foods	407	4	MJ			W R Grace	53					4	HJ
		1	SE*									1	HJ*
		1	MJ	1	LJ								
U S Steel	15	4	HJ	Warnaco	456	4	MJ*						
		2	HJ*			Warner Communications	114	1	HJ				
		1	HTP*					1	HJ				
Union Camp	204	4	MJ	-									
		7	MJ*										
		3	SE*										
Union Carbide	37	1	TTH										
		3	HJ										
		4	HJ										
		1	MJ										

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SE—Single Engine; LPT—Light Piston
Twin; PPT—Pressurized Piston
Twin; HPT—Heavy Piston Twin; PPM
—Pressurized Piston 4-Engine; LTP
—Light Turboprop; HTP—Heavy Tur-
boprop; LJ—Light Jet; MJ—Medium
Jet; HJ—Heavy Jet; PH—Piston Hel-
icopter; TH—Turbine Helicopter; TTH
—Twin Turbine Helicopter.